

## REMARKS

Claims 1, 3, 4, 6-7, and 10 are pending in the present application. Claim 4 has been canceled, and no claims have been added, leaving Claims 1, 3, 6-7, and 10 for further consideration in the present amendment.

Claim 1 has been amended to include the limitations from original claim 4 that methyl ethyl ketone, cyclohexanone, methyl isoamyl ketone, and 2-heptanone are included in the list of compounds from which the organic solvent can be selected. In addition, claim 10 has been amended for clarification purposes. Accordingly, no new matter has been introduced by this amendment.

Reconsideration and allowance of the claims is respectfully requested in view of the following remarks.

### Claim Rejections Under 35 U.S.C. § 103

Claims 1, 3, 6-7, and 10 stand rejected under 35 U.S.C. § 103(a), as allegedly being unpatentable over the state of the prior art admitted by the Applicants in view of any one of U.S. Patent No. 6,489,616 to Giedd (hereinafter “Giedd”) and U.S. Patent No. 4,144,634 to Chang *et al.* (hereinafter referred to as “Chang”). Applicants respectfully traverse these rejections.

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a *prima facie* case of obviousness. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). It has long been recognized that establishing a *prima facie* case of obviousness requires that all elements of the invention be disclosed in the prior art. *In re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970). Moreover, in *KSR International Co. v. Teleflex Inc.*, the Supreme Court recently found that it remains legally insufficient to conclude that a claim is obvious “merely by demonstrating that each element was, independently, known in the prior art.” *KSR International Co. v. Teleflex Inc.*, 127 S. Ct. 1731 (2007). The Court stated that it is also important for the Examiner to “identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.” *Id.*

Additionally, the Court indicated that “this analysis should be made explicit.” *Id.*

The cited art, whether taken singly or in combination, fails to teach or suggest removing dopant ions from a semiconductor material surface by coating it with a non-aqueous organic solvent selected from the group consisting of methyl ethyl ketone, cyclohexanone, methyl isoamyl ketone, 2-heptanone, polyhydric alcohols, cyclic ethers and esters, and mixtures thereof, as recited in claim 1. In contrast, Giedd discloses removing dopants with an acetone solution as opposed to the organic solvents listed in claim 1 (column 16, lines 7-11). Chang also fails to teach or suggest removing dopant ions using the organic solvents listed in claim 1. On the contrary, Chang discloses cleaning an epitaxially grown GaAs containing dopants using trichloroethylene, acetone, and alcohol (column 5, 41-44). Applicants assert that this reference to “alcohol” is general and would not lead a person of skill in the art to specifically use polyhydric alcohols, especially since no examples of alcohols are given. The fact that a claimed species or subgenus is encompassed by a prior art genus is not sufficient by itself to establish a *prima facie* case of obviousness. *In re Baird*, 16 F.3d 380, 382, 29 USPQ2d 1550, 1552 (Fed. Cir. 1994) (“The fact that a claimed compound may be encompassed by a disclosed generic formula does not by itself render that compound obvious.”); *In re Jones*, 958 F.2d 347, 350, 21 USPQ2d 1941, 1943 (Fed. Cir. 1992). See also MPEP § 2144.08. Moreover, Chang in no way suggests the limitation in claim 1 that the semiconductor material surface is coated with the organic solvent subsequent to implantation of dopant ions into the surface.

Additionally, in the Background section of the present application, conventional cleaning methods such as the RCA clean are disclosed (paragraphs 8-9). However, there is no teaching or suggestion in the Background section that a solvent selected from the list in claim 1 can be used for removing dopants from a surface.

In view of the foregoing, independent Claim 1 and dependent Claims 3, 6-7, and 10, which depend therefrom, are not rendered obvious in view of the cited art. Applicants therefore respectfully request the withdrawal of the 35 U.S.C. § 103(a) rejections of these claims.

It is believed that the foregoing amendments and remarks fully comply with the Office

Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and allowance is requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 09-0458 maintained by Assignee.

Respectfully submitted,

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